Amendment to the Claims

Claims 1-28 (Canceled)

29. (Currently amended) A transgenic mouse whose genome comprises a disruption in the ~~null~~ endogenous CX2 ~~allele~~gene, wherein said disruption comprises replacement of nucleotides corresponding to bases 327 through 422 of SEQ ID NO:1 with a LacZ-Neo cassette.
30. (Previously presented) The transgenic mouse of claim 46, wherein the increased seizure susceptibility is characterized by a decreased response threshold to metrazol, relative to a wild-type control mouse.
31. (Previously presented) The transgenic mouse of claim 46, wherein the increased glucose tolerance or increased ability to metabolize glucose is characterized by a decrease in blood glucose level after administration of glucose, relative to a wild-type mouse.
32. (Previously presented) A cell or tissue obtained from the transgenic mouse of claim 29.
33. (Canceled)
34. (Canceled)
35. (Canceled)
36. (Previously presented) A method of producing the transgenic mouse of claim 1, the method comprising:
    a. introducing a targeting construct capable of disrupting the endogenous murine CX2 gene into a murine embryonic stem cell;
    b. selecting for the murine embryonic stem cell which has undergone homologous recombination;
    c. introducing the murine embryonic stem cell selected for in step (b) into a mouse blastocyst;
    d. implanting the resulting blastocyst into a pseudopregnant mouse, wherein the resultant mouse gives birth to a chimeric mouse; and
    e. breeding the chimeric mouse to produce the transgenic mouse.
37. (Canceled)
38. (Previously presented) A targeting construct comprising:
    a. a first polynucleotide sequence homologous to at least a first portion of an endogenous murine CX2 gene;

b. a second polynucleotide sequence homologous to at least a second portion of the endogenous murine CX2 gene; and

c. a selectable marker gene located between the first and second polynucleotide sequences.

39. (Previously presented) A method of producing a targeting construct, the method comprising:

a. providing a first polynucleotide sequence homologous to at least a first portion of an endogenous murine CX2 gene;

b. providing a second polynucleotide sequence homologous to at least a second portion of the endogenous murine CX2 gene;

c. providing a selectable marker gene; and

d. inserting the first sequence, second sequence, and selectable marker gene into a vector such that the selectable marker gene is located between the first and second sequences to produce the targeting construct.

40. (Canceled)

41. (Canceled)

42. (Currently amended) The transgenic mouse of claim 29 wherein said mouse is heterozygous for said ~~null allele~~disruption.

43. (Currently amended) The transgenic mouse of claim 29 wherein said mouse is homozygous for said ~~null allele~~disruption.

44. (Canceled)

45. (Canceled)

46. (Previously presented) The transgenic mouse of claim 43 wherein said mouse exhibits, relative to a wild-type control mouse, at least one of increased seizure susceptibility, increased glucose tolerance, and increased ability to metabolize glucose.